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IS 7149 (1973): Fibreboard boxes for canned sea foods for export [CHD 15: Paper and its products]



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# *Indian Standard*

## SPECIFICATION FOR FIBREBOARD BOXES FOR CANNED SEA FOODS FOR EXPORT

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# Indian Standard

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# *Indian Standard*

## SPECIFICATION FOR FIBREBOARD BOXES FOR CANNED SEA FOODS FOR EXPORT

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 7 November 1973, after the draft finalized by the Paper and Flexible Packaging Sectional Committee had been approved by the Marine, Cargo Movement and Packaging Division Council.

**0.2** India exports a sizeable quantity of its production of canned sea foods. Packaging of canned sea foods in suitable 'outers' becomes important so as to cause less damage to the cans which will be sold in retail in the markets of the importing countries. This standard has been formulated to help the Indian exporters to provide adequate and functional packaging and improving the quality of Indian exports.

**0.3** Implementation of this standard will ensure tighter pack; reduced risk of dents to cans and damage to labels; prevent bulging of outer boxes in warehouses.

**0.4** In preparing this standard, considerable assistance has been derived from the indigenous practices and due weightage is also given to the prevailing international practices.

**0.5** For the purpose of deciding, whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value, should be the same as that of the specified value in this standard.

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### 1. SCOPE

**1.1** This standard prescribes the requirements for fibreboard transport boxes for export of canned sea foods. Requirements for the closure of the container after filling are also specified.

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\*Rules for rounding off numerical values (*revised*).

## **2: TERMINOLOGY**

**2.1** For the purpose of this standard the terms given in IS : 4261-1967\* and IS : 7186-1973† shall apply.

## **3. BOX**

**3.1** The outer box shall be made from corrugated fibreboard, or solid fibreboard the external surface of which has been treated with a suitable water repellent material ( for instance, bitumanized kraft paper, wax, water replent kraft paper, etc ).

NOTE — In the case of corrugated fibreboard 3 or 5 ply may be used.

## **4. STYLE**

**4.1** The fibreboard box shall conform to the style No. 0204 specified in IS : 6481-1971‡.

## **5. DIMENSIONS**

**5.1 Length and Width** — The inside length and width of the box shall be an exact multiple of the diameter measured over the chimb of the can.

**5.1.1** A tolerance of + 3 mm shall be allowed on the internal length and width of the box.

**5.2 Height** — The internal height of the transport box shall not exceed an exact multiple of the height measured over the chimb of the can intended to be packed into the container.

**5.2.1** Whenever partitions and separators are used due tolerance shall be allowed on the internal dimensions of the box.

**5.3 Flaps** — The flaps shall meet without binding or overlapping.

## **6. SAMPLING, CONDITIONING AND TESTING**

**6.1 Sampling** — The boxes shall be sampled and tested within 20 days of their receipt by the purchaser from each consignment of 10 000 boxes or part thereof; 20 boxes shall be selected for testing as follows:

- a) If the boxes are bundled, 20 bundles shall be selected at random and from each bundle so selected, one box shall be selected at random for testing.
- b) If the boxes are not bundled, 20 boxes shall be selected at random from the total consignment.

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\*Glossary of terms relating to paper and pulp based packaging materials.

†Glossary of terms relating to paper and flexible packaging.

‡Guide for principle uses and styles of fibreboard containers.



**6.2 Conditioning** — The sample of 20 boxes selected as in 6.1 shall be deemed to represent the whole consignment of boxes and shall be conditioned for testing by the method prescribed in 5 of IS : 1060 (Part I) - 1966\*.

**6.3 Testing** — The types of test and the selection of boxes for testing shall be as indicated in Table 1.

**TABLE 1 TESTING OF BOXES**

(Clauses 6.3, 6.4 and 6.5)

SL No.	TYPE OF TEST	NUMBER OF BOXES TO BE SELECTED FROM SAMPLE FOR TESTING	NUMBER OF TEST SPECIMENS OBTAINED FROM EACH BOX	NUMBER OF TESTS ON EACH TEST SPECIMEN
(1)	(2)	(3)	(4)	(5)
i)	Bursting strength	3	1	6 ( 3 each side )
ii)	Waterproofness ( Cobb/30 min )	3	5	1 ( on external surface only )
iii)	Substance:			
	a) for corrugating medium	3	2	1
	b) for combined weight of liners			
iv)	Puncture resistance of combined board	3	5	1

**6.3.1** The requirements for the material of construction of the box as well as the methods of test for evaluating these requirements shall be as given in Table 2.

**6.4 Criteria for Conformity** — The consignment of boxes shall be deemed to comply with the test requirements of the specification if, after the specified number of boxes from the test sample as given in Table 1, has been tested as required in Table 2,

a) all the boxes pass the test, or

b) only one box fails to pass one or more of the tests and on retesting in accordance with 6.5, no further box fails to pass the test or tests.

**6.5 Retests** — If only one box from the test sample fails to meet all the test requirements of the specification, further boxes shall be selected at random from the consignment of boxes for testing for the defective property or properties. The number of additional boxes to be tested shall be twice the number specified in Table 1 for the test or tests in which the box from the original test sample failed.

\*Methods of sampling and test for paper and allied products: Part I ( revised ).

**TABLE 2 PHYSICAL REQUIREMENTS OF SOLID AND CORRUGATED FIBREBOARD**

( Clauses 6.3.1 and 6.4 )

Sl. No.	TYPE OF TEST	REQUIREMENTS				METHOD OF TEST, REF to CL No.
		Upto 20 kg		Above 20-30 kg		
		SFB	CFB	SFB	CFB	
(1)	(2)	(3)	(4)	(5)	(6)	(7)
i)	Bursting strength kg/cm <sup>2</sup> , <i>Min</i>	12	12	15	15	12.5 of IS: 1060 ( Part I )-1966*
ii)	Waterproofness ( Cobb min 30 ), <i>Max</i>	120	120	120	120	6 of IS: 4006 ( Part I )-1966†
iii)	Substance g/m <sup>2</sup> , <i>Min</i> :	1 400	—	1 600	—	6 of IS: 1060 ( Part I )-1966*
	a) For corrugating medium	—	170 ( 3 ply ) 150 ( 5 ply )	—	170 ( 3 ply ) 150 ( 5 ply )	
	b) For combined weight of liners	—	400 ( 3 ply ) 450 ( 5 ply )	—	450 ( 3 ply ) 500 ( 5 ply )	
iv)	Type of flute		A, B, C or any combi- nation of these		A, B, C or any combi- nation of these	
v)	Puncture resistance§ beach units, <i>Min</i>	200	175	200	200	9 of IS: 4006 ( Part II )-1972‡

\*Methods of sampling and test for paper and allied product, Part I ( revised ).

†Methods of test for paper and pulp based packaging materials, Part I.

‡Methods of test for paper and pulp based packaging materials, Part II.

§Not less than four puncture test shall be made on unscored areas, only one test may fall below the minimum prescribed, but not more than 10 percent below the prescribed minimum. One test shall be made in such a manner that the corrugations of the combined board run in the same plane as the puncture arm and one test with corrugations at right angles to the first test. Such tests shall be made from both sides of the board.

## 7. MANUFACTURERS' JOINT

7.1 The manufacturers' joint shall be stitched, glued, or taped as follows:

### a) *Stitched Joint*

- i) *Stitching lap* — The stitching lap shall be not less than 30 mm wide, and may be inside or outside the box.
- ii) *Spacing of stitches* — The centre-to-centre spacing of stitches shall not exceed 60 mm. The clear distance from a cut edge of the fibreboard to any stitch shall be not less than 6 mm and not more than 25 mm. The stitches shall be made at an angle of 45° to the cut edge.

b) *Glued Joint*

- i) The glueing lap shall be not less than 30 mm wide.
- ii) The adhesive used for the joint shall be water-resistant type.
- iii) The adhesive applied shall be in a strip not less than 25 mm.
- iv) The adhesive shall be applied not nearer to a cut edge than 3 mm, and not nearer to a crease at the ends of the lap than 12 mm.

c) *Taped Joint*

- i) The side and end to be joined shall meet within 5 mm but not nearer than 1.5 mm.
- ii) The tape used for the joint shall be gummed reinforced tape not less than 50 mm wide.
- iii) The tape shall be applied symmetrically about the joint.
- iv) The tape shall start and finish within 3 to 6 mm from the crease at each end of the joint.

**8. CLOSURE**

**8.1** The box when filled shall be securely closed by glueing the outer flaps to the innerflaps with a water-resistant type glue.

**8.2** The quality of the glue and the amount of glue used for the closure shall be such that all the flaps will remain glued together with all normal conditions of transport and storage.

**8.3 Gum Taping** — Suitable gum tape, minimum 50 mm wide, shall be used on all seams.

**8.4 Strapping** — Two nonmetallic straps minimum 12 mm wide shall be used in suitable directions.

**9. PRINTABILITY OF OUTER SURFACE**

**9.1** The condition of the outer surface of the box shall be such as to allow the marking, stamping or stencilling of the box with the type of ink normally used for the purpose.

**10. PACKING AND MARKING**

**10.1 Packing** — The boxes shall be supplied in the form as agreed to between the purchaser and the vendor.

**10.2 Marking** — In addition to the marking of the buyer, each box shall have the following information legibly and indelibly marked on the outside of the bottom of the box unless marking in any other position is agreed to by the purchaser:

- a) Name or registered trade-mark of the box manufacturer,
- b) Words ' FOR EXPORT ',
- c) Gross mass limit of the box, and
- d) Bursting strength of the fibreboard.

**10.2.1** The box may also be marked with the ISI Certification Mark.

NOTE — The use of ISI Certification Mark is governed by the provisions of the Indian Standards Institution ( Certification Marks ) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

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# **INDIAN STANDARDS**

## **ON**

### **PAPER AND FLEXIBLE PACKAGING**

#### **IS:**

- 2771-1965 Corrugated fibreboard boxes
- 6481-1971 Guide for principal uses and styles of fibreboard containers
- 6715-1972 Master cartons for export of frozen sea foods and frog legs